The Critical Coastal Areas Program

Yet Another State Program? Yet More Meetings?



Identification of Need

- Focus on coastal watersheds with polluted runoff
- Prioritization of issues in collaborative, increasingly politicized, stakeholder-driven environment
- Coordination of resources
- Tech transfer and development of management and decision tools

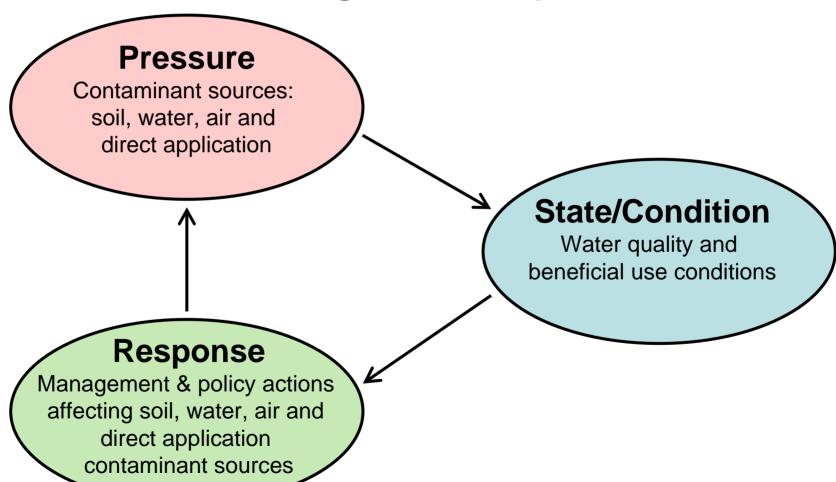
Preliminary Findings and Observations

- Actions are rarely following a systematic line of inquiry and applied mostly randomly by trial and error
- Government "Silo" Phenomenon
- Basic data are lacking at the sufficient scale to identify opportunities
- Frequent disconnect between land use planning and WQ protection

More Preliminary Findings and Observations

- Regulatory environment is unsettled
- Coastal hydrologic regime can be challenging
- No clear linkages between land-based sources of pollution and marine biological health

Modified "Pressure – State – Response" Model for water quality and management response



MR 1. Direct Application Practices

- Timing
- Amounts

MR 2. Land Management

- Land uses
- Sediment/erosion control
- Cropping
- Impermeable surfaces

MR 3. Water Use Management

- •Irrigation practices
- Water conservation

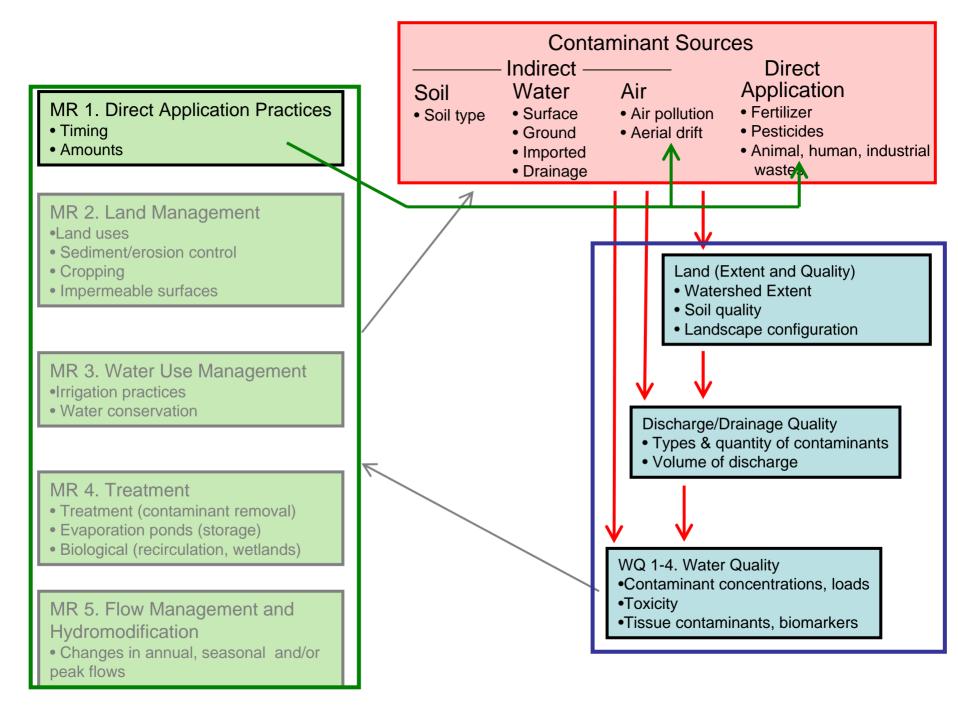
MR 4. Treatment

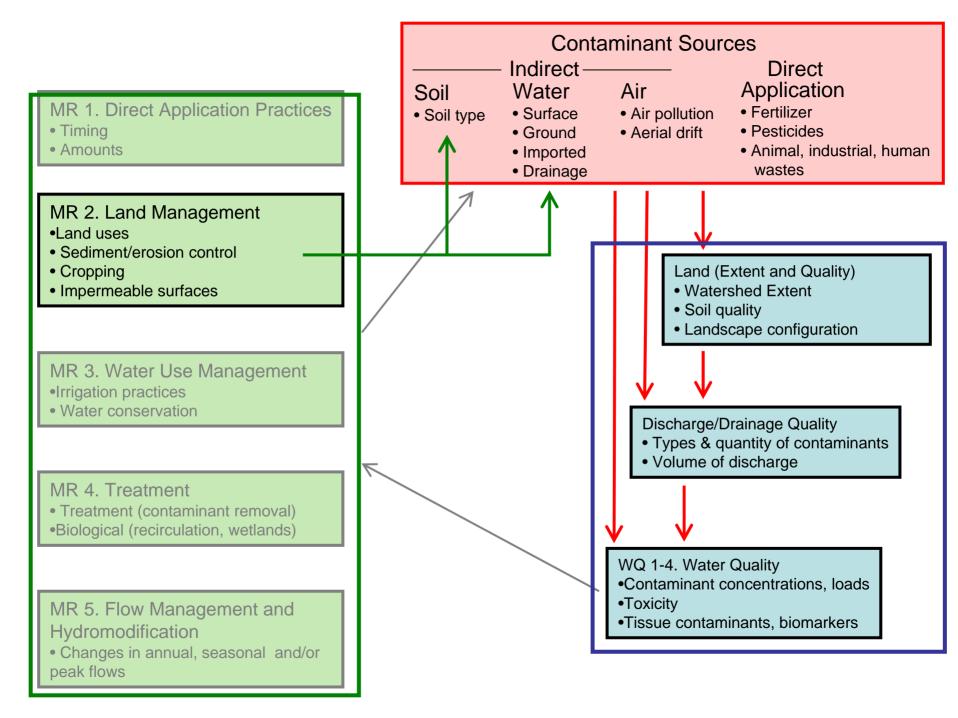
- Treatment (contaminant removal)
- •Biological (recirculation, wetlands)

MR 5. Flow Management and Hydromodification

Changes in annual, seasonal and/or peak flows

Contaminant Sources Indirect— Direct Application, Air Soil Water Fertilizer Surface Air pollution Soil type Pesticides • Ground Aerial drift Animal, human, industrial Imported Drainage wastes Land (Extent and Quality) Watershed Extent Soil quality Landscape configuration Discharge/Drainage Quality Types & quantity of contaminants Volume of discharge WQ 1-4. Water Quality Contaminant concentrations, loads Toxicity •Tissue contaminants, biomarkers





Contaminant Sources Indirect— Direct **Application** Air Soil Water MR 1. Direct Application Practices Fertilizer Surface Air pollution Soil type Timing Aerial drift Pesticides • Ground Amounts Animal, human, industrial Imported Drainage wastes MR 2. Land Management Land uses Sediment/erosion control Cropping Land (Extent and Quality) • Impermeable surfaces Watershed Extent Soil quality Landscape configuration MR 3. Water Use Management Irrigation practices Water conservation Discharge/Drainage Quality Types & quantity of contaminants Volume of discharge MR 4. Treatment Treatment (contaminant removal) •Biological (recirculation, wetlands) WQ 1-4. Water Quality Contaminant concentrations, loads Toxicity MR 5. Flow Management and •Tissue contaminants, biomarkers Hydromodification • Changes in annual, seasonal and/or peak flows

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